

Patent

Serial No. 10/510,787

Amendment in Reply to Office Action of April 19, 2006

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Currently amended) A read and/or write head for an optical disk drive, comprising a lens holder, a support frame, means for suspending the lens holder in the support frame, ~~which means constrain~~ wherein the means constrain movement of the lens holder relative to the support frame, allowing only ~~an at least a~~ limited translation in a ~~focussing~~ focusing direction (z), parallel to the optical axis of a lens in the lens holder, ~~an at least a~~ limited translation in a tracking direction (y), perpendicular to the ~~focussing~~ focusing direction (z), and ~~an at least a~~ limited rotation about an axis in a tangent direction (x), perpendicular to both the ~~focussing~~ focusing and the tracking direction, and actuator means, comprising two conductive ~~focussing~~ focusing coils with a winding axis parallel to the ~~focussing~~ focusing direction (z), each positioned relative to a magnetic circuit in such a way that a current flowing through a coil gives rise to a force between the lens holder and the support frame in the ~~focussing~~ focusing direction (z), the winding axes of the two ~~focussing~~ focusing coils being positioned on opposite sides of a plane through the center of mass of the lens holder and parallel to the ~~focussing~~ focusing and tangent direction, ~~characterized in that~~ wherein the focussing coils

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are ~~spaced apart~~ offset from each other along an axis extending in the tangent direction (x).

2. (Currently amended) ~~The~~ A read and/or write head according to of claim 1, wherein the distance (d) between each winding axis of a ~~focussing~~ focusing coil and the plane through the center of mass of the lens holder, and parallel to the ~~focussing~~ focusing and the tangent direction, is smaller than the distance from the winding axis to the winding of each ~~focussing~~ focusing coil in a lateral direction parallel to the tangent direction.

3. (Currently amended) ~~A~~ The read and/or write head according to of claim 1, wherein the two ~~focussing~~ focusing coils are point-symmetrically arranged relative to the center of mass of the lens holder.

4. (Currently amended) ~~A~~ The read and/or write head according to of claim 1, wherein the two ~~focussing~~ focusing coils are mounted on the lens holder.

5. (Currently amended) ~~A~~ The read and/or write head according to of claim 1, wherein each magnetic circuit comprises a yoke extending at least partly through the corresponding ~~focussing~~ focusing coil along its winding axis.

6. (Currently amended) ~~A~~ The read and/or write head according to of claim 5, wherein each magnetic circuit forms a loop in a plane parallel to the ~~focussing~~ focusing and the tangential direction and

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comprises an air gap through which the windings of the corresponding ~~focussing~~focusing coil can move, at least one radial coil being mounted on the lens holder and located in each air gap with a winding axis aligned with the flux through the magnetic circuit.

7. (Original) A The read and/or write head ~~according to~~of claim 6, wherein two radial coils are mounted side by side in the tracking direction (y) in the air gap in each magnetic circuit.

8. (Original) A The read and/or write head ~~according to~~of claim 1, wherein the suspension means comprise four wire members, each attached at one end to the lens holder and at the other end to the support frame.

9. (Original) A The read and/or write head ~~according to~~of claim 4, wherein the wire members are of an electrically conducting material and are electrically connected to the coils.

10. (Original) A The read/write head ~~according to~~of claim 8, wherein the wire members are provided with a cladding of an elastic material.

11. (Currently Amended) An optical disk drive comprising the read and /or write head according to claim 1.

12. (New) The read and/or write head of claim 1, wherein the focusing coils are offset in the tracking direction.

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13. (New) A read and/or write head for an optical disk drive, comprising a lens holder, a support frame, a support member configured to support the lens holder in the support frame and configured to allow a limited movement of the lens, an actuator comprising two focusing coils that are positioned offset from each other along an axis extending in the tangent direction, wherein the focusing coils are arranged to control movement of the lens in the focusing direction.

14. (New) A read and/or write head according to claim 13, wherein the focusing coils are offset in the tracking direction.